



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No.: 05-747)

In the Application of:
Meinke et al.

Serial No.: 10/552,156

Filing Date: October 11, 2005

Title: Streptococcus Pyogenes Antigens

Examiner: Baskar

Confirmation No.: 4561

Group Art Unit: 1645

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

TRANSMITTAL LETTER

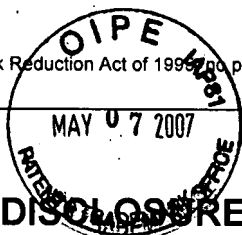
1. We are transmitting herewith the attached papers for the above-described patent application: Information Disclosure Statement and return postcard.
2. GENERAL AUTHORIZATION TO CHARGE OR CREDIT FEES: Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2490.
3. CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8: The undersigned hereby certifies that this Transmittal Letter and the papers, as described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 1, 2007.

Respectfully submitted,
McDonnell Boehnen Hulbert & Berghoff

Dated: May 1, 2007

By:

Kevin E. Noonan, Ph.D.
Reg. No. 35,303



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	10552156
Filing Date	2005-10-11
First Named Inventor	Meinke
Art Unit	1645
Examiner Name	Baskar, Padmavathi
Attorney Docket Number	05-747

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5744309			Patent Withdrawn	
	2	4946778		1990-08-07	Genex Corp	
	3	5849902		1998-12-15	Oligos Etc. Inc.	
	4	5989912		1999-11-23	Oligos Etc. Inc.	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

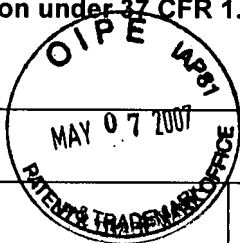


Application Number		10552156
Filing Date		2005-10-11
First Named Inventor	Meinke	
Art Unit	1645	
Examiner Name	Baskar, Padmavathi	
Attorney Docket Number	05-747	

1	WO 02/059148	WO		2002-08-01	Cistem Biotechnologies GmbH	<input type="checkbox"/>
2	A-O 464 533	EP		1992-01-08	Behringwerke AG	<input type="checkbox"/>
3	2045869	CA		1991-12-29	Behringwerke Aktiengesellschaft	<input type="checkbox"/>
4	197 42 706	DE		1999-04-15	Skerra Arne Prof Dr	<input type="checkbox"/>
5	0 533 838	EP		1993-03-31	Univ Colorado Foundation	<input type="checkbox"/>
6	98/08856	WO		1998-03-08	Furste, et al.	<input type="checkbox"/>
7	97/30721	WO		2007-03-19	Boehringer Ingelheim International GmbH	<input type="checkbox"/>
8	99/38528	WO		1999-08-05	Boehringer Ingelheim GmbH	<input type="checkbox"/>
9	02/13857	WO		2002-02-21	Cistem Biotechnologies GmbH	<input type="checkbox"/>
10	02/32451	WO		2002-04-25	Cistem Biotechnologies GmbH	<input type="checkbox"/>
11	01/93905	WO		2001-12-13	Cistem Biotechnologies GmbH	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)



Application Number		10552156
Filing Date		2005-10-11
First Named Inventor	Meinke	
Art Unit	1645	
Examiner Name	Baskar, Padmavathi	
Attorney Docket Number	05-747	

12	01/54720	WO		2001-02-02	Cistem Biotechnologies GmbH	<input type="checkbox"/>
13	01/93903	WO		2001-12-13	Cistem Biotechnologies GmbH	<input type="checkbox"/>
14	02/05448	EP			Wrong number	<input type="checkbox"/>
15	A 1924/2001	AU		2003-06-17	Intercell AG	<input type="checkbox"/>
16	01/24822	WO		2001-04-12	Cistem Biotechnologies GmbH	<input type="checkbox"/>

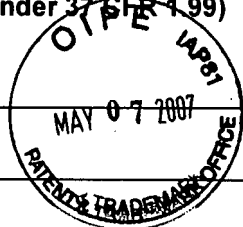
If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Adamou, J., et al. (2001). "Identification and Characterization of a Novel Family of Pneumococcal Proteins That Are Protective against Sepsis" Infect Immun 69: 949-58	<input type="checkbox"/>
	2	Altschul, S., et al. (1990). "Basic Local Alignment Search Tool" Journal of Molecular Biology 215: 403-10	<input type="checkbox"/>
	3	Bennett, D., et al. (1995). J Mol Recognit 8: 52-8	<input type="checkbox"/>
	4	Brown, J., et al. (2001). "Immunization with Components of Two Iron Uptake ABC Transporters Protects Mice against Systemic Streptococcus pneumoniae Infection" Infect Immun 69: 6702-6	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

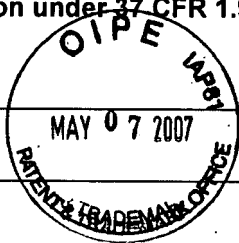


Application Number	10552156
Filing Date	2005-10-11
First Named Inventor	Meinke
Art Unit	1645
Examiner Name	Baskar, Padmavathi
Attorney Docket Number	05-747

5	Burnie, J., et al. (1998). "The renaissance of antibody therapy" J Antimicrob Chemother 41: 319-22	<input type="checkbox"/>
6	Clackson, T., et al. (1991). Nature 352: 624-8	<input type="checkbox"/>
7	Devereux, J., et al. (1984). "A comprehensive set of sequence analysis programs for the VAX" Nucleic acids research 12: 387-95	<input type="checkbox"/>
8	Di Guilmi, A., et al. (2002). "New approaches towards the identification of antibiotic and vaccine targets in Streptococcus pneumoniae" EMBO Reports 3: 728-34	<input type="checkbox"/>
9	Doherty, E., et al. (2001). Annu Rev Biophys Biomol Struct 30: 457-475	<input type="checkbox"/>
10	Eisenbraun, M., et al. (1993). DNA Cell Biol 12: 791-7	<input type="checkbox"/>
11	Wizemann, T., et al. (2001). "Use of a Whole Genome Approach To Identify Vaccine Molecules Affording Protection against Streptococcus pneumoniae Infection" Infect Immun 69: 1593-8	<input type="checkbox"/>
12	Etz, H., et al. (2001). "Bacterial Phage Receptors, Versatile Tools for Display of Polypeptides on the Cell Surface" J Bacteriol 183: 6924-35	<input type="checkbox"/>
13	Ganz, T. (1999). "Defensins and Host Defense." Science 286: 420-421	<input type="checkbox"/>
14	Georgiou, G. (1997). "Display of heterologous proteins on the surface of microorganisms: From the screening of combinatorial libraries to live recombinant vaccines" Nature Biotechnology 15: 29-34	<input type="checkbox"/>
15	Gray, B., et al. (1979). J Infect Dis 140: 979-83	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)



Application Number		10552156
Filing Date		2005-10-11
First Named Inventor	Meinke	
Art Unit	1645	
Examiner Name	Baskar, Padmavathi	
Attorney Docket Number	05-747	

16	Gray, B., et al. (1986). Pediatr Infect Dis 5: 201-7	<input type="checkbox"/>
17	Hashemzadeh-Bonehi, L., et al. (1998). Mol Microbiol 30: 676-678	<input type="checkbox"/>
18	Hausdorff, W., et al. (2001). "Geographical differences in invasive pneumococcal disease rates and serotype frequency in young children" Lancet 357: 950-2	<input type="checkbox"/>
19	Tettelin, H., et al. (2001). Science 293: 498-506.	<input type="checkbox"/>
20	Hemmer, B., et al. (1999). "Identification of candidate T-cell epitopes and molecular mimics in chronic Lyme disease" Nat Med 5: 1375-82	<input type="checkbox"/>
21	Hoe, N., et al. (2001). "Distribution of Streptococcal Inhibitor of Complement Variants in Pharyngitis and Invasive Isolates in an Epidemic of Serotype M1 Group A Streptococcus Infection" J Infect Dis 183: 633-9	<input type="checkbox"/>
22	Hornef, M., et al. (2002). "Bacterial strategies for overcoming host innate and adaptive immune responses" Nat Immunol 3: 1033-40	<input type="checkbox"/>
23	Hoskins, J., et al. (2001). "Genome of the Bacterium Streptococcus pneumoniae Strain R6" J Bacteriol 183: 5709-17	<input type="checkbox"/>
24	Hyde, T., et al. (2001). "Macrolide Resistance Among Invasive Streptococcus pneumoniae Isolates" JAMA 286: 1857-62	<input type="checkbox"/>
25	Jedrzejewski, M. (2001). Microbiol Mol Biol Rev 65: 187-207	<input type="checkbox"/>
26	Johanson, K., et al. (1995). "Binding Interactions of Human Interleukin 5 with Its Receptor Subunit" J Biol Chem 270: 9459-71	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)



Application Number		10552156
Filing Date		2005-10-11
First Named Inventor	Meinke	
Art Unit	1645	
Examiner Name	Baskar, Padmavathi	
Attorney Docket Number	05-747	

27	Jones, P., et al. (1986). "Replacing the complementarity-determining regions in a human antibody with those from a mouse" Nature 321: 522-5	<input type="checkbox"/>
28	Kajava, A., et al. (2000). "The Net Charge of the First 18 Residues of the Mature Sequence Affects Protein Translocation across the Cytoplasmic Membrane of Gram-Negative Bacteria" J Bacteriol 182: 2163-9	<input type="checkbox"/>
29	Kohler, G., et al. (1975). "Continuous cultures of fused cells secreting antibody of predefined specificity " Nature 256: 495-7	<input type="checkbox"/>
30	Kolaskar, A., et al. (1990). "A semi-empirical method for prediction of antigenic determinants on protein antigens" FEBS Lett 276: 172-4	<input type="checkbox"/>
31	Lewin, A., et al. (2001). "Ribozyme gene therapy: applications for molecular medicine" Trends Mol Med 7: 221-8	<input type="checkbox"/>
32	Marks, J., et al. (1992). Biotechnology (N Y) 10: 779-83	<input type="checkbox"/>
33	McCafferty, J., et al. (1990). Nature 348: 552-4	<input type="checkbox"/>
34	McCormick, A., et al. (2003). "Geographic diversity and temporal trends of antimicrobial resistance in Streptococcus pneumoniae in the United States" Nat Med 9: 424-30	<input type="checkbox"/>
35	McDaniel, L., et al. (1991). "PspA, a surface protein of Streptococcus pneumoniae, is capable of eliciting protection against pneumococci of more than one capsular type" Infect Immun 59: 222-8	<input type="checkbox"/>
36	Navarre, W., et al. (1999). Microbiol Mol Biol Rev 63: 174-229	<input type="checkbox"/>
37	Okano, H., et al. (1991). J Neurochem 56: 560-7	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

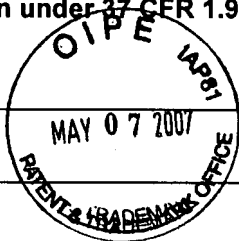
(Not for submission under 35 CFR 1.99)



Application Number	10552156
Filing Date	2005-10-11
First Named Inventor	Meinke
Art Unit	1645
Examiner Name	Baskar, Padmavathi
Attorney Docket Number	05-747

38	Tourdot, S., et al. (2000). "A general strategy to enhance immunogenicity of low-affinity HLA-A2.1-associated peptides: implication in the identification of cryptic tumor epitopes" Eur J Immunol 30: 3411-21.	<input type="checkbox"/>
39	Orange, M., et al. (1993). Pediatr Infect Dis J 12: 244-6	<input type="checkbox"/>
40	Pelton, S., et al. (2003). "Pneumococcal conjugate vaccines: proceedings from an Interactive Symposium at the 41st Interscience Conference on Antimicrobial Agents and Chemotherapy" Vaccine 21: 1562-71	<input type="checkbox"/>
41	Phillips-Quagliata, J., et al. (2000). "The IgA/IgM Receptor Expressed on a Murine B Cell Lymphoma Is Poly-Ig Receptor" J Immunol 165: 2544-55	<input type="checkbox"/>
42	Rammensee, H., et al. (1999). "SYFPEITHI: database for MHC ligands and peptide motifs" Immunogenetics 50: 213-9	<input type="checkbox"/>
43	Roche, H., et al. (2003). "Regions of PspA/EF3296 Best Able To Elicit Protection against Streptococcus pneumoniae in a Murine Infection Model" Infect Immun 71: 1033-41	<input type="checkbox"/>
44	Romero-Steiner, S., et al. (1999). "Reduction in Functional Antibody Activity Against Streptococcus pneumoniae in Vaccinated Elderly Individuals Highly Correlates with Decreased IgG Antibody Avidity" Clin Infect Dis 29: 281-8	<input type="checkbox"/>
45	Rosenow, C., et al. (1997). "Contribution of novel choline-binding proteins to adherence, colonization and immunogenicity of Streptococcus pneumoniae" Mol Microbiol 25: 819-29	<input type="checkbox"/>
46	Seeger, C., et al. (1984). "The Cloned Genome of Ground Squirrel Hepatitis Virus is Infectious in the Animal" Proc Natl Acad Sci U S A 81: 5849-52	<input type="checkbox"/>
47	Shibuya, A., et al. (2000). "Fc receptor mediates endocytosis of IgM-coated microbes" Nature Immunology 1: 441-6	<input type="checkbox"/>
48	Sekra, A. et al. (1994). "Use of the tetracycline promoter for the tightly regulated production of a murine antibody fragment in Escherichia coli" 151: 131-5	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)



Application Number	10552156
Filing Date	2005-10-11
First Named Inventor	Meinke
Art Unit	1645
Examiner Name	Baskar, Padmavathi
Attorney Docket Number	05-747

49	Talkington, D. et al (1996) Microb Pathog 21: 17-22	<input type="checkbox"/>
50	Tang, D., et al. (1992). Nature 356: 152-4.	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

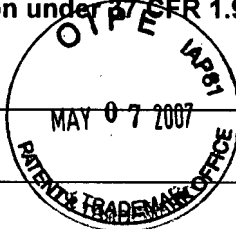
Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)



Application Number	10552156
Filing Date	2005-10-11
First Named Inventor	Meinke
Art Unit	1645
Examiner Name	Baskar, Padmavathi
Attorney Docket Number	05-747

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature		Date (YYYY-MM-DD)	
Name/Print		Registration Number	

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**